Claims 1, 3, 9, 11 to 13 and 41 have been rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite.

Applicants have amended the claims in a manner which is believed to overcome the technical objections raised by the Examiner. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1, 3, 9, 12 and 13 have been rejected under 35 U.S.C. § 102 as allegedly being anticipated by G.B. 1,454,055 (UK'055).

Applicants respectfully traverse this rejection.

The present invention relates to a hemostatic agent or polymer composition comprising beads of a cross-linked dextran which cause the rapid induction of blood coagulation and hemostasis at an active bleeding site. The beads absorb low molecular weight (MW) blood and plasma constituents into the grains or beads, while high MW constituents such as fibrinogen, platelets, and clotting factors are concentrated on the surface of the grains or beads and the bleeding site. This concentration results in rapid blood coagulation and hemostasis without the use of extraneous or other exogenous compounds. Instant claim 1 specifies that the nature of the beads is such that the beads induce a physiological clotting process at a bleeding site.

The instant claims are limited in a way such that cross-linked dextran beads which do not induce clotting at a bleeding are excluded from the claims. Support for this claim 1 recitation can be found at page 15, lines 9 to 14 of the instant specification.

UK'055 relates to a method for treating fluid-discharging skin surfaces, wounds and mucous membranes. (p. 1, lines 9-11). It is pointed out that blood coagulation which promotes scar formation is disadvantageous on a liquid-discharging skin surface. (p. 1, lines 20-34). UK'055 asserts that the concentration of fibrin monomers and cross-linked fibrin immediately adjacent to the discharging surface should be as low as possible. (p. 1, lines 35-41). It is an objective of the UK'055 invention to prevent scar formation, i.e., to prevent blood clotting at the liquid discharging surface. (p. 1, lines 42-48). At p. 2, lines 85-90, UK'055 specifically states that coagulation does not take place on the discharging surface.

The cross-linked dextrans which can be used in the UK'055 method can be chosen from a wide range of cross-linked dextrans. However, the useful cross-linked dextrans should be such that

> "...fibrin and fibrin coagulation cannot be formed ... in the zone adjacent to the discharging surface."

(See p. 3, lines 96-106).

It is readily apparent from the entire UK'055 disclosure that rapid blood coagulation and hemostasis at an active bleeding site is not contemplated by this patent. Furthermore, the cross-linked dextrans which are useful in the UK'055 invention must be such that blood coagulation and hemostasis does not occur at a wound or bleeding site.

In contrast, the present invention relates to a hemostatic agent and polymer composition comprising beads wherein the cross-linked dextran beads concentrate fibrinogen on the surface of the beads which in turn triggers rapid blood clotting and hemostasis directly at the active bleeding site.

To constitute an anticipation, all the claimed elements must be found in exactly the same situation and united in the same way to perform the identical function in a single unit of the prior art. *Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc.*, 726 f.2d 724, 726, 220 U.S.P.Q. 841, 842 (Fed. Cir. 1984); *Integra LifeSciences I Ltd. v. Merck KgaA*, 1999 WL 398180, *398180, 50 U.S.P.Q.2d 1846, 1848 (S.D.Cal. 1999).

It is urged that UK'055 neither teaches nor suggests the present invention and, in fact, teaches away from the present invention. The invention in UK'055 uses cross-linked dextran such that substances are excluded from the dextran epichlorohydrin polymer particles migrate towards the outer layer of the particle mass, and blood coagulation at the wound surface is prevented. There is no disclosure in UK'055 directed towards application of the covering to an active bleeding site.

The cross-linked dextran composition of the present invention as defined in claim 1 fixes fibrinogen and other clotting factors on the surface of the polymer beads or grains to form a

biodegradable clotting matrix which remains in the active bleeding site. This type of material is clearly excluded from being useful in the invention of UK'055.

UK'055 fails to teach or suggest any hemostatic composition comprising beads of a cross-linked dextran which can provide for the rapid induction of blood coagulation and hemostasis at a bleeding site. The instant claims clearly define the use of cross-linked dextrans which promote clotting at a wound surface. Such is not the case with UK'055 which uses dextrans which do not cause such an effect. It is urged that the present claims define an invention which is patentably distinct from the invention of UK'055. Applicants respectfully submit that the present invention is not anticipated by UK'055 and urge the Examiner to withdraw this rejection.

Claims 11 and 41 Are Not Obvious Over the Combinations of References Cited by the Examiner.

Claims 11 has been rejected under 35 USC § 103(a) as allegedly being unpatentable over the UK'055 Patent or the '336 Patent further in view of Larson [R], or Eloy *et al.* and the '190 Patent.

Reconsideration and withdrawal of the § 103 Rejections of claims 11 and 41 are requested. None of the secondary references relied upon by the Examiner remedy the serious defects of the UK'055 patent as set forth above.

There Is No Suggestion to Combine Any of the References.

Finally, there is no suggestion in any of the aforementioned references to combine their disclosures in a manner which discloses either the compositions or methods of use of the compositions claimed in the present invention. Applicants urge that any possible combination set forth by the Examiner would not comprise the elements of the claimed invention and would be improper because the references taken alone or together do not teach or suggest the present invention. Such a combination is proper only when there is some objective teaching in the prior art that would lead one of ordinary skill in the art to combine the relevant teachings of the references. *In re Fine*, 5 U.S.P.Q. 2d 1956, 1598 (Fed. Cir. 1988)

CONCLUSION

For all the above reasons, Applicants respectfully request the Examiner to withdraw all objections to and rejections of the present invention. It is urged that this application is now in condition for allowance. Early and favorable action by the Examiner is earnestly solicited.

Respectfully submitted,

Date 04/17/02

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SPECIFICATION AS AMENDED

Page 21, Paragraph 1, **delete** this paragraph in its entirety:

[Suitable hydroxyl group-containing substances are: polyvinyl alcohol, sugar alcohols, carbohydrates (*i.e.*, saccaharose, sorbitol), polysaccharides (*i.e.*, dextran, starch, alginate, cellulose), and hydroxyl group containing neutral derivatives of the above compounds.]

And **replace** with the following paragraph:

Suitable hydroxyl group-containing substances are: polyvinyl alcohol, sugar alcohols, carbohydrates (*i.e.*, saccharose, sorbitol), polysaccharides (*i.e.*, dextran, starch, alginate, cellulose), and hydroxyl group containing neutral derivatives of the above compounds.

Page 21, Paragraph 2, **delete** this paragraph in its entirety:

[Examples of suitable bifunctional organic substances for preparing the hemostatic polymer composition of the invention include one of epichlorohydrin, dicholorhydrin, diepoxybutane, diepoxypropyl ether, ethylene-glycol-bis-epoxypropul-ehter.]

And **replace** with the following paragraph:

Examples of suitable bifunctional organic substances for preparing the hemostatic polymer composition of the invention include one of epichlorohydrin, dichlorohydrin, diepoxybutane, diepoxypropyl ether, ethylene-glycol-bis-epoxypropul-ether.

CLAIMS AS AMENDED

Please **amend** claims 1 and 3 to read as follows:

1. (Amended) A dry, storage stable, sterile dressing for application to a bleeding site which comprises a dry hemostatic zone, said zone comprising a matrix containing hemostatis-promoting amount of a hemostatic agent which accelerates blood coagulation and clot formation at an interface between the bleeding site and the hemostatic zone wherein said hemostatic agent comprises beads [or grains] of cross-linked dextran wherein said cross-linked dextran triggers

release of clotting factors and other ancillary substances which initiate a physiological clotting process when applied to the bleeding site.

3. (Amended) The dry, sterile, dressing according to claim 1, [further comprising] wherein the dressing is affixed to a substrate.